

## Claims

- [1] A light emitting device comprising:  
a light emitting chip; and  
a phosphor through which a first light emitting from the light emitting chip passes,  
wherein the phosphor comprises a silicate phosphor exciting a second light having a first centered emission peak using the first light and a sulfide phosphor exciting a third light having a second centered emission peak using the first light.
- [2] The light emitting device according to claim 1, wherein the first centered emission peak is in a range of 550 - 600 nm.
- [3] The light emitting device according to claim 1, wherein the second centered emission peak is in a range of 500 - 550 nm.
- [4] The light emitting device according to claim 1, wherein the silicate phosphor has a chemical formula of  $\text{Sr}_{3-x}\text{SiO}_5:\text{Eu}^{2+} x (0 < x \leq 1)$ .
- [5] The light emitting device according to claim 1, wherein the sulfide phosphor has a chemical formula of  $\text{Sr}_{1-x}\text{Ga}_2\text{S}_4:\text{Eu}^{2+} x (0.001 \leq x \leq 1)$ .
- [6] The light emitting device according to claim 1, wherein the silicate phosphor and the sulfide phosphor exist at a ratio of 1 : 1 to 1 : 9.
- [7] The light emitting device according to claim 1, wherein the phosphor has a particle size of  $d_{90} \leq 20 \mu\text{m}$ ,  $5 \leq d_{50} \leq 10 \mu\text{m}$ .
- [8] The light emitting device according to claim 1, wherein the light emitting chip emits blue light.
- [9] The light emitting device according to claim 1, wherein the phosphor is molded in a periphery of the light emitting chip or on the light emitting chip.
- [10] The light emitting device according to claim 1, wherein the phosphor is manufactured by mixing the phosphor with a light transmitting resin.
- [11] The light emitting device according to claim 10, wherein the resin is an epoxy resin or a silicon resin.
- [12] The light emitting device according to claim 1, wherein the silicate phosphor is a yellow series and the sulfide phosphor is a green series.
- [13] A phosphor of a light emitting device, comprising:  
a silicate phosphor excited by a light generated by a light emitting chip and having a chemical formula of  $\text{Sr}_{3-x}\text{SiO}_5:\text{Eu}^{2+} x (0 < x \leq 1)$ ; and  
a sulfide phosphor excited by the light generated by the light emitting chip and having a chemical formula of  $\text{Sr}_{1-x}\text{Ga}_2\text{S}_4:\text{Eu}^{2+} x (0.001 \leq x \leq 1)$ .
- [14] A light emitting device comprising:  
a substrate;

- a light emitting chip emitting a light;
  - a connection part for electrically connecting the substrate with the light emitting chip;
  - a phosphor encapsulating the light emitting chip and through which the light passes;
  - a silicate phosphor contained in the phosphor and having a chemical formula of  $\text{Sr}_{3-x}\text{SiO}_5:\text{Eu}^{2+} x (0 < x \leq 1)$ ; and
  - a sulfide phosphor contained in the phosphor and having a chemical formula of  $\text{Sr}_{1-x}\text{Ga}_2\text{S}_4:\text{Eu}^{2+} x (0.001 \leq x \leq 1)$ .
- [15] The light emitting device according to claim 14, wherein when the light emitting device is a top view type, the silicate phosphor and the sulfide phosphor exist at a ratio of 1 : 2 to 1 : 3.
- [16] The light emitting device according to claim 14, wherein when the light emitting device is a side view type, the silicate phosphor and the sulfide phosphor exist at a ratio of 1 : 3 to 1 : 4.
- [17] A light emitting device comprising:
- a leadframe;
  - a light emitting chip emitting a light;
  - a connection part for electrically connecting the leadframe with the light emitting chip;
  - a phosphor encapsulating and molding the light emitting chip and through which the light passes;
  - a silicate phosphor contained in the phosphor and having a chemical formula of  $\text{Sr}_{3-x}\text{SiO}_5:\text{Eu}^{2+} x (0 < x \leq 1)$ ; and
  - a sulfide phosphor contained in the phosphor and having a chemical formula of  $\text{Sr}_{1-x}\text{Ga}_2\text{S}_4:\text{Eu}^{2+} x (0.001 \leq x \leq 1)$ .
- [18] A light emitting device comprising:
- a light emitting chip emitting a light; and
  - a resin-based phosphor through which the light emitting from the light emitting chip passes;
- wherein the phosphor comprises a yellow silicate phosphor exciting a second light having a first centered emission peak using the first light and a green sulfide phosphor exciting a third light having a second centered emission peak using the first light, and the green sulfide phosphor and the yellow silicate phosphor exist at a ratio of 1 : 2 to 1 : 5.
- [19] The light emitting device according to claim 18, wherein the phosphor is contained at a ratio of 15 - 30 wt% with respect to the base so as to emit white light.

- [20]       The light emitting device according to claim 18, wherein the phosphor is contained at a ratio of 5 - 15 wt% with respect to the base so as to emit bluish light.